



PATENT  
ATTORNEY DOCKET NO. 053588-5004

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of:	)	
Junichi ICHIKAWA	)	Confirmation No. 4723
Application No. 09/722,452	)	Group Art Unit: 2872
Filed: November 28, 2000	)	Examiner: Euncha P. Cherry
For: LIGHT SCANNING METHOD	)	
AND LIGHT SCANNING DEVICE	)	

Commissioner for Patents  
U.S. Patent and Trademark Office  
2011 South Clark Place  
Customer Window  
Crystal Plaza Two, Lobby, Room 1B03  
Arlington, VA 22202

Sir:

**RESPONSE AND REQUEST FOR RECONSIDERATION**

In response to the Office Action dated June 19, 2003 (Paper No. 10), the period for response to which has been extended through November 19, 2003 by the request for a two-month extension of time and fee filed concurrently herewith, reconsideration and withdrawal of the rejections set forth in the pending Office Action are respectfully requested.

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**Summary of the Office Action**

In the Office Action dated June 19, 2003, claims 1-2 and 5-8 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Patent No. 5,251,055 to Koide (hereinafter "Koide") in view of U.S. Patent No. 5,008,686 to Saito (hereinafter "Saito"). Claims 3-4 and 9-10 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Koide in view of Saito, and further in view of U.S. Patent No. 4,932,734 to Sakuma et al. (hereinafter "Sakuma").

**Summary of the Response to the Office Action**

Applicant respectfully traverses these rejections and the Office Action's interpretation of the applied references, and respectfully requests reconsideration of this application, withdrawal of all rejections, and the timely allowance of all pending claims.

**The Rejection of Claims 1-2 and 5-8 under 35 U.S.C. § 103(a)**

Claims 1-2 and 5-8 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Koide in view of Saito. Claims 3-4 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Koide in view of Saito, and further in view of Sakuma. Applicant traverses this rejection and the Office Action's interpretation of the applied references for the following reasons.

The instant independent claim 1 recites a light scanning method comprising a step of "focusing the plural light beams deflected by said deflector on a surface to be scanned, with an afocal relation between the reflection surfaces of the deflector and the surface to be scanned in the direction orthogonal to the main scanning direction" (Emphasis added).

The instant independent claim 2 recites a light scanning device combination including a second optical system for focusing plural light beams “with an afocal relation between the reflection surfaces of the deflector and the surface to be scanned in the direction orthogonal to the main scanning direction” (Emphasis added).

The Office Action states at page 4, that “Koide does not disclose an afocal relation between the reflection surfaces of the deflector and the surface to be scanned in the direction orthogonal to the main scanning direction.” However, The Office Action alleges that Saito discloses the features of claims 1 and 2 recited above. Applicant respectfully submits that Saito does not teach or suggest the claimed light scanning method including at least these particular features.

In applying Saito to reject these claims, it appears that the Office Action might be relying on the recitation of the term “afocal” at column 4, lines 1-14 of Saito. Applicant respectfully submits that the prevailing definition for “afocal” is provided in Applicant’s own disclosure. Specifically, the following definition of “afocal” is provided at page 8, lines 19-23 of the specification as filed:

since the reflection surfaces of the deflector and the surface to be scanned are in an afocal relation (light beams are incident thereon and exit therefrom in a parallel state), the plural light beams deflected by the deflector are incident on the surface to be scanned in a parallel state. (Emphasis added).

As pointed out in MPEP § 2106,

Office personnel must rely on the applicant’s disclosure to properly determine the meaning of terms used in the claims. Markman v. Westview Instruments, 52 F.3d 967, 980, 34 USPQ2d 1321, 1330 (Fed. Cir.) (*en banc*), *aff’d*, U.S., 116 S. Ct. 1384 (1996)... Where an explicit definition is provided by the applicant for a term, that definition will control interpretation of the term as it is used in the claim.

Applicant respectfully submits that, as discussed in Saito at column 3, line 47 to column 4, line 14, and as depicted in FIG. 4A of Saito, plural light beams emitted by light emitters 1a and 1b are collimated by collimator lens 2 at predetermined angles. After being shaped by stop 3, the light beams depicted in FIG. 4 are incident upon deflecting-reflecting surface 4a and emerge therefrom in a divergent state. In light of the definition of “afocal” provided in Applicant’s own disclosure, Applicant respectfully submits that Saito does not teach at least the afocal relation between the reflection surfaces of the deflector and the surface to be scanned in the manner recited in independent claims 1 and 2.

In view of the foregoing remarks, Applicant respectfully asserts that Saito fails to cure the deficiencies of Koide with regard to at least the features of independent claims 1 and 2 recited above. Accordingly, Applicant respectfully submits that Koide and Saito, whether taken singly or in combination, do not teach or suggest each feature of independent claims 1 and 2. As pointed out in MPEP § 2143.03, “[t]o establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. In re Royka, 490 F.2d 981, 180 USPQ 580 (CCPA 1974).” Thus, Applicant respectfully submits that claims 1 and 2 are in condition for allowance as being patentable over Koide in view of Saito.

Furthermore, Applicant respectfully submits that claims 3-8 should be allowed for at least the same reasons as set forth above with regard to independent claim 2 upon which they depend, respectively. Applicant further submits that Sakuma fails to cure the deficiencies of Koide and Saito with regard to claims 3-4. Accordingly, Applicant respectfully requests that the rejections of claims 3-8 under 35 U.S.C. § 103(a) be withdrawn.

**The Rejection of Claims 9 and 10 under 35 U.S.C. § 103(a)**

Claims 9-10 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Koide in view of Saito, and further in view of Sakuma. Applicant traverses this rejection and the Office Action's interpretation of the applied references for the following reasons.

The instant independent claim 9 recites a light scanning device combination including at least a first cylinder optical system and a second cylinder optical system in an arrangement where:

“said first optical system sets an afocal and conjugate relation between the light source and reflection surfaces of the deflector, and said second optical system focuses the plural light beams deflected by said deflector onto the surface to be scanned while setting an afocal and conjugate relation between the reflection surfaces of the deflector and the surface to be scanned.”

The Office Action states at page 5 that Koide in view of Saito does not disclose the feature that “said first optical system sets an afocal and conjugate relation between said light source and the reflection surfaces of said deflector.” However, the Office Action alleges that Sakuma discloses the features of claim 9 recited above. Applicant respectfully submits that Sakuma does not teach or suggest the claimed light scanning method including at least these particular features for at least the following reasons.

In the instant invention as recited in claim 9, afocal and conjugate relations are set “between the light source and reflection surfaces of the deflector” and also “between the reflection surfaces of the deflector and the surface to be scanned.” On the contrary, as depicted in FIG. 6 and FIG. 11 of Sakuma, as recited at column 4, line 67, to column 5, line 2, and as discussed at column 7, lines 32-35: “there is no conjugate relationship between an exit pupil surface of the collimator lens 11 and the deflection/reflection surface 4 of the rotary polygon

mirror 3.” Moreover, Applicant respectfully submits that Sakuma does not, in any respect, teach or suggest setting afocal and conjugate relations “between the light source and reflection surfaces of the deflector.”

In view of the foregoing remarks, Applicant respectfully asserts that Sakuma fails to cure the deficiencies of Koide and Saito with regard to at least the features of independent claim 9 recited above. Accordingly, Applicant respectfully submits that Koide, Saito and Sakuma, whether taken singly or in combination, do not teach or suggest each feature of independent claim 9. Thus, Applicant respectfully submits that claim 9 is in condition for allowance as being patentable over Koide in view of Saito, and further in view of Sakuma. Furthermore, Applicant respectfully submits that dependent claim 10 should be allowed at least because of its dependence upon allowable claim 9 and for the reasons set forth above. Accordingly, Applicant respectfully requests that the rejection of claims 9 and 10 under 35 U.S.C. § 103(a) be withdrawn.

**Conclusion**

In view of the foregoing remarks, Applicant respectfully requests reconsideration of this application, withdrawal of all rejections, and the timely allowance of all pending claims. Should the Examiner feel that there are any issues outstanding after consideration of this response, the Examiner is invited to contact Applicant's undersigned representative to expedite prosecution.

If there are any other fees due in connection with the filing of this response, please charge the fees to our Deposit Account No. 50-0310. If a fee is required for an extension of time under 37 C.R.R. § 1.136 not accounted for above, such an extension is requested and the fee should also be charged to our Deposit Account.

Respectfully Submitted,

**MORGAN, LEWIS & BOCKIUS LLP**

Dated: November 19, 2003

By:

  
Baldine Brunel Paul

Registration No. 54,369

Customer No. 09629

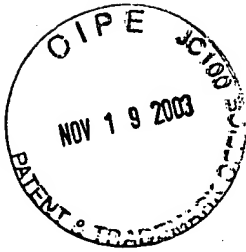
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Sir:

**RESPONSE TRANSMITTAL FORM**

1. Transmitted herewith is a Request for Reconsideration in response to the Office Action dated June 19, 2003 (Paper No. 10).
2. Additional papers enclosed:
  - ☐ Terminal Disclaimer to Obviate a Double Patenting Rejection Over a Prior Patent
  - ☐ Drawings: ☐ Formal ☐ Informal (Correction)
  - ☐ Information Disclosure Statement
  - ☐ Form PTO-1449, \_\_\_\_\_ references included
  - ☐ Citations
  - ☐ Declaration of Biological Deposit
  - ☐ Submission of "Sequence Listing", computer readable copy and/or amendment pertaining thereto for biotechnology invention containing nucleotide and/or amino acid sequence.



3. Extension of Time

The proceedings herein are for a patent application and the provisions of 37 C.F.R. § 1.136(a) apply.

☐ Applicant believes that no extension of time is required. However, this conditional petition is being made to provide for the possibility that Applicant has inadvertently overlooked the need for a petition and fee for extension of time.

☒ Applicant petitions for an extension of time, the fees for which are set out in 37 C.F.R. § 1.17(a), for the total number of months checked below:

Total Months Requested	Fee for Extension	[Fee for Small Entity]
<input type="checkbox"/> one month	\$ 110.00	\$ 55.00
<input checked="" type="checkbox"/> two months	\$ 420.00	\$ 210.00
<input type="checkbox"/> three months	\$ 950.00	\$ 475.00
<input type="checkbox"/> four months	\$ 1,480.00	\$ 740.00

Extension of time fee due with this request: \$ 420.00.

If an additional extension of time is required, please consider this a Petition therefor.

☐ An extension for \_\_\_\_\_ months has already been secured and the fee paid therefor of \$ \_\_\_\_\_ is deducted from the total fee due for the total months of extension now requested.

4. Constructive Petition

☒ EXCEPT for issue fees payable under 37 C.F.R. § 1.18, the Commissioner is hereby authorized by this paper to charge any additional fees during the entire pendency of this application including fees due under 37 C.F.R. §§ 1.16 and 1.17 which may be required, including any required extension of time fees, or credit any overpayment to Deposit Account 50-0310. This paragraph is intended to be a CONSTRUCTIVE PETITION FOR EXTENSION OF TIME in accordance with 37 C.F.R. § 1.136(a)(3).

5. Fee Calculation (37 C.F.R. §1.16)

CLAIMS AS AMENDED						
	Claims Remaining After Amendment		Highest No. Previously Paid	Present Extra	at Rate of	Total Fees
Total Claims (37 C.F.R. §1.16(c))	10	minus	20	0	x \$18 each=	+ \$0.00
Independent Claims (37 C.F.R. §1.16(b))	3	minus	3	0	x \$86 each=	+ \$0.00
[ ] First presentation of Multiple dependent claim(s)					\$290.00	+ \$0.00
SUB-TOTAL =						\$0.00
Reduction by ½ for filing by a small entity						- \$0.00
TOTAL FEE =						\$0.00

6. Fee Payment

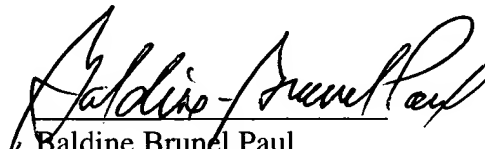
- ☐ No fee is to be paid at this time.
- ☒ The Commissioner is hereby authorized to charge the fee of **\$420.00** for the two-month extension of time to Deposit Account No. 50-0310.
- ☒ The Commissioner is hereby authorized to charge any additional fees which may be required, including fees due under 37 C.F.R. §§ 1.16 and 1.17, or credit any overpayment to Deposit Account 50-0310.

Respectfully Submitted,

**MORGAN, LEWIS & BOCKIUS LLP**

Dated: November 19, 2003

By:

  
 Baldine Brunel Paul  
 Registration No. 54,369

Customer No. 09629

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